JULY, 1927

ENTOMOLOGICAL NEWS

Vol. XXXVIII No. 7

JAMES H. B. BLAND,
1833-1911

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PHILADELPHIA, PA.
THE ACADEMY OF NATURAL SCIENCES,
Logan Square

Entered at the Philadelphia, Pa., Post Office as Second Class Matter.
Acceptance for mailing at the special rate of postage prescribed for in Section 1103,
Act of October 3, 1917, authorized January 15, 1921.

ENTOMOLOGICAL NEWS,
ACAD. NAT. SCI.
PHILADELPHIA, PENN'A.

ENTOMOLOGICAL NEWS

published monthly, excepting August and September, by The American Entomological Society.

Philip P. Calvert, Ph.D., Editor; E. T. Cresson, Jr., Associate Editor.

Advisory Committtee: Philip Laurent, J. A. G. Rehn, Chas. Liebeck, J. Chester Bradley, Ph.D., Frank Morton Jones, John C. Lutz, Max Kisliuk, Jr.

The subscription price per year of ten (10) numbers is as follows:

United States and possessions . .	$3.00
Canada, Central and South America .	3.15
Foreign	3.25

Single copies 35 cents

ADVERTISING RATES: Full width of page. Payments in advance.

One issue,	1 in.,	$ 1.20,	2 in.,	$ 2.40,	half page,	$ 4.00,	full page,, $ 8.00
Ten issues	"	11.00,	"	20.00,	"	35.00,	" 70.00

SUBSCRIPTIONS AND ADVERTISEMENTS. All remittances, and communications regarding subscriptions, non-receipt of the NEWS or of reprints, and requests for sample copies, should be addressed to **Entomological News, 1900 Race St., Philadelphia, Pa.**

All complaints regarding non-receipt of issues of the NEWS should be presented within three months from date of mailing of the issue. After that time the numbers will be furnished only at the regular rate for single copies. Not more than two issues will be replaced gratis, through loss in transit or in change of address, unless such have been registered, at the subscriber's expense.

MANUSCRIPTS. Address all other communications to the editor, Dr. P. P. Calvert, Zoological Laboratory, University of Pennsylvania, Philadelphia, Pa.

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René Martin
avocat
Le Blanc (Indre)

ENTOMOLOGICAL NEWS

VOL. XXXVIII JULY, 1927 No. 7

René Martin.

(Portrait and Autograph, Plate IV).

René Martin, well known French student of the Odonata, died at Villa Alemana, a small village between Valparaiso and Santiago, Chile, August 20, 1925. His death was briefly announced at the meeting, on October 14, 1925, of the Entomological Society of France, of which he had been a member since 1891. As his taxonomic work concerned the North American fauna as well as that of other parts of the globe, and as no biographical notice in any entomological journal is known to the writer*, it seems appropriate that some account of his life and entomological researches should appear in the NEWS. Thanks to the kindness of his daughter, Madame Montané-Martin, I have received a copy of a biographical notice by his long-time associate, M. Raymond Rollinat (*Le Journal du Departement de l'Indre* of, apparently, July 23, 1926). Before me lie seventy-one letters and cards from M. Martin to myself from June 26, 1890, to July 14, 1922. From these sources and from his published papers the following is derived.

René Martin was born at Châtellerault, department of Vienne, France, June 5, 1846, of a family some of whose members had filled public offices. He attended the Lycée of Versailles from 1859 to 1866 and studied law at Paris from 1866 to 1870. In the war of 1870-71 he served in the fourth battalion of the garde mobile of Vienne during the campaign of the Loire under General Chanzy. On October 10, 1871, he married Mlle. Marie Falchéro, and as her property was located in the adjoining department of Indre, to the east, he removed to Le Blanc in 1872. Here, from 1876 to 1907, he was *avoué*,[1]

*Not until the present article was in page proof, did I learn of the obituary in Ann. Soc. Ent., France xcvi, pp. 27-30.

[1] So Rollinat, *l. c.*, although M. Martin often signed his letters to me with "avocat" following his name. "In France . . . there is, however, a distinction between *avocats* and *avoués*. The latter, whose number is limited, act as procurators or agents, representing the parties before the tribunals, draft and prepare for them all formal acts and writings, and prepare their lawsuits for the oral debates. The office of the *avocat*, on the other hand, consists in giving advice as to the law, and conducting the causes of his clients by written and oral pleadings. The number of *avocats* is not limited . . ." (Encyc. Brit. (13) I, p. 241. 1926).

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and here he devoted much time to the study of the vertebrates, the Lepidoptera, the Neuroptera (in the Linnean sense) and especially the Odonata; the nearby forests of Boischaut and marshes of la Brenne furnishing him with much material. Here too, from August 8 to 10, 1895, I had the pleasure of visiting him and his family and of making some collecting trips for dragonflies with him. The population of Le Blanc in 1891 was about 7400.

Our correspondence, translated here as elsewhere, had begun with his letter of June 26, 1890:

I have seen in "Entomological News" that you ask for Odonata of Europe. I shall be very happy to enter into relations of exchange with you. I have almost all, if not all the species of France and vicinity and I can send you them in such quantity as you desire. For example, I take here in numbers *Gomphus simillimus, graslini, uncatus.*

I eagerly accepted his proposal and our exchanges of specimens and of publications continued until 1922, although with a long interruption previous to and during the world war. In my first letter to him I asked for five males and five females of each species. He on his part would be content with two specimens of each sex, but in a few years requested a larger number for his other correspondents. On October 31, 1890, he wrote:

Indeed the only French species which I have not taken myself are *Epitheca bimaculata, Macromia splendens, Gomphus flavipes* and *serpentinus, Nehalennia speciosa.* All the other species I have found in the department of Indre and the surrounding departments. I even have the conviction that I shall discover *Macromia splendens* here, which inhabits la Charente, but up to the present my efforts have not been crowned with success.

At the beginning of January [1894] I went to pass four days in Belgium, solely to visit the collections of M. de Selys-Longchamps. I spent three days with him at Liège and I examined his splendid collections to the bottom. I believe no other collection is as rich, nevertheless I was astonished how many species were lacking even of those described by him . . . notably *Oligoeschna modigliani,* of which only a dozen specimens are known in collections according to M. de Selys. I have kept 4

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of them, I have sent him 2 (he had none) and I send you 2 (letter of Jan. 30, 1894).

I made a trip into Italy, but I took only common species except that in the south of France I captured a single specimen of *Somatochlora alpestris*. At Genoa I visited the museum, but there was nothing great there except the collection made by M. Fea in Burma which is beautiful. M. Fea showed it to me in detail. (Letter of Sept. 27, 1894).

I remark that some collections which I have studied have nothing in insects of your country. North America, so rich, is not represented and indeed I myself have received nothing from there except from you (Dec. 5, 1894).

In later years, of course, the number of his correspondents increased and included Professors D. S. Kellicott and J. G. Needham, Miss Mattie Wadsworth and Mr. E. B. Williamson.

On March 28, 1896, Mr. Robert McLachlan wrote:

In the beginning of last month I had a hurried visit from M. Martin. He arrived in London on Monday evening—spent the Tuesday with me—the Wednesday at the British Museum and returned same evening. He had never been in England before, But I had met him in Paris a few years ago.

Somewhat more than a year later, M. Martin wrote:

It is with difficulty that I write to you, for two months ago I was the victim of a serious accident of the chase. In taking a gun into my carriage I received two shots point blank; one finger of the right hand was carried away and the left arm pierced in several places so that I was near death. Happily I am much better (Aug. 16, 1897).

On February 4, 1899, Mr. McLachlan wrote:

M. Martin spent the day here on Wednesday last. He looks none the worse for his gun accident. He is certainly getting together a big collection of Odonata and very rapidly, for he says he has over 1200 species.

In 1900, sometime previous to November, Madame Martin died. She was a very pleasant person who spoke English well, having lived in Guernsey for some years. I still preserve the record of her farewell when I left Le Blanc—that I must repeat my visit to them when next I came to France—an opportunity that never presented itself.

That to this loss was soon added another is evidenced by his letter of December 13, 1900:

I am truly desolated for I learned, the day before yesterday, of the death of our friend, M. de Selys-Longchamps. His decrease, although it was to be expected at any time, on account of the age of our old master, has deeply afflicted me.

The next letter refers to the plans for the proposed catalogue of the Selys collections:

I have arrived from Liège where I looked over the collection of our friend M. de Selys. I found there MM. Ris and Förster, whom you know. The question is that of making a general history of the Odonata in honor of M. de Selys, based on his collection. M. Ris is charged with the Libellulinae, I with the Cordulinae and the Aeschninae, Förster with the Agrioninae. There are no collaborators as yet for the other families. Much was said of you and it was regretted that you are so far from Europe. One would have liked to ask you to take the Gomphinae or the Calopteryginae. In any case, all will have much recourse to you, if you will, especially Ris and I. MM. de Selys are willing to spend considerable money in order to have a very beautiful publication (April 7, 1901.)[2]

Under the date of January 11, 1902, M. Martin asked for duplicates of American Cordulines "for I am occupying myself

[2] It seems not inappropriate to print here certain other letters to me, although not from M. Martin, which bear upon this undertaking, on account of their historical interest.

Mr. Robert McLachlan wrote from London, 20 May, 1901: As to M. de Selys. To my utter surprise I found he had left *me* a considerable sum of money in return for which I was to work out the collections. This was uttterly and totally impossible and I at once renounced all right to the money. From what I know of the collections I don't think any of the parties quite realize what they have undertaken to do.

Baron Walter de Selys wrote on March 22, 1901: In view of the persistent refusal of Mr. McLachlan, a refusal founded, unhappily, on the state of his health (invincible insomnia), M. le Dr. Ris has been willing to accept the scientific direction of the work to be done for the publication of a methodical (and iconographic?) catalogue, with diagnoses of the new forms, of the collection of Odonata left by my father. My father, by his will, has imposed upon me, in spite of my incompetence, the heavy burden of the *administrative* direction (if I can so call it). Independently of my nephew Maurice, still an absolute novice in this branch and whose rôle in consequence can at first be only secondary, we believe we can count for the present in the number of collaborators of the projected work, MM. René Martin and Foerster. If the Atlantic had not separated you from us we would not have been wanting in calling upon your collaboration also . . .

with the work on the Cordulines of the De Selys Collection;" on September 9, 1904, that his collaboration on the *Genera Insectorum* of M. Wytsman had been requested and on December 27 that his revision of the Aeschnines of the Selys collection was approaching completion, followed by other letters asking for information on certain North American species of this group, and giving and offering any assistance I might desire in the preparation of the Odonate part of the *Biologia Centrali-Americana.*

Then came his removal to Paris.

A word to advise you that I am leaving the town of Le Blanc for a while. I am going to live in Paris and take my collections there. My new address is Rue du Chemin Vert 78. (April 26, 1908.)

From Paris, March 29, 1909, he wrote: "I am occupying myself at this moment with the Calopterygines of the Selys collection;" on June 10, 1911, from 20 Rue d'Angoulême, in the same city: "I am about finishing the manuscript of the Calopterygidae of the Selys collection," and on March 31, 1912, that he had finished it. At this date he referred to his wish, communicated also to Mr. E. B. Williamson, to sell his principal collection of Odonata. On behalf of the Academy of Natural Sciences of Philadelphia, Dr. Henry Skinner went to the rooms in the Rue d'Angoulême in August, 1912, after the meeting of the Second International Congress of Entomology at Oxford. It is to this that M. Martin refers in his card of September 3:

I have received the visit of the Doctor and his daughter; he glanced for a long while (il a jeté un long coup d'oeil) at my collection.

Dr. Skinner made an unfavorable report so that no further steps were taken either by the Academy or Mr. Williamson to secure the collection. It remained unsold in 1920 when M. Martin was preparing to go to Chile, and he was still anxious to dispose of it. In a letter of April 15 of that year he wrote: "It contains many types and at least 1600 species."

In two letters from Chile he mentioned:

I have given my collection to the Paris Museum. I have kept 1. All the group of *Lestes* of which I am making a monograph, 2. A series of types of South America, 3. The Odonata of Chile (April 17, 1921). I have here a part of my collection, the group of *Lestes*, . . . and a certain number of types of South America. I have left at Brussels my manuscript on the Calopterygids of the Selys collection and that on the genera of Gomphines. They will appear, I am told, when the price of paper and printing ink will permit (Jan. 8, 1921).

The world war was chiefly responsible for a gap of nearly eight years in our correspondence. In his letter of April 15, 1920, he says:

Of my four sons, I have lost two [Louis and Antoine] in the war.[3] My daughter married, a year and a half ago, a Frenchman established in Chile, who came to fight in France and she leaves next September for Chile. I am going to accompany her and I will spend at least a year, perhaps two, in central Chile. I am going to study the fauna of that country and pass my time collecting Odonata . . . I have not received many insects during the war other than several boxes of Odonata from Tonkin and some sent by my son, administrator of the colonies in West Africa, who has collected for me in a great part of [that region]. He has sent me especially some remarkable Gomphines and I have been able to found several new genera.

In the first letter which he sent me from South America he wrote from Villa Alemana, Province of Valparaiso:

I have been in Chile a month, in a wild country surrounded by denuded hills and, farther away, high mountains. For six months not a drop of rain has fallen and the dryness is frightful. The heat is torrid. Every day about eleven o'clock in the morning a wind arises, often very violent, while the sun is shining, and continues until six in the evening. So I have found relatively few insects, 40 or 50 species of Coleoptera, 20 of Lepidoptera, 50 of other orders. Happily one owner had made a dam in a little brook now dry, about 2 or 3 kilometers from my home, and above this dam is a pretty little shady pond and I go there almost every day. Besides I have made three trips into the mountains. (Jan. 8, 1921).

[3] M. Rollinat tells us that the other two sons, Hubert and Jacques, the latter an administrator in French Central Africa, also took part in the war.

For four and a half months I have collected almost every day and I begin to know the country very well, but winter is beginning, the Odonata, excepting *Aeschna diffinis,* disappear and I fear I shall not find many more until August. I have several hundred species of Coleoptera, as many Hymenoptera, Hemiptera, etc., and only 19 species of Odonata. There are a few diurnal Lepidoptera but they, excepting *Colias* and *Vanessa,* disappeared some days ago, but in revenge the nocturnal Lepidoptera are transforming at this instant. Life in Chile is not disagreeable. I have visited the museum of Valparaiso which is nothing: 200 poor birds, 2 cases of insects without names and 7 Odonata. That of Santiago is good. There is quite a complete collection of Chilean birds and a certain number of Chilean insects. There is almost nothing outside of the zoology of Chile. I have determined their Odonata, a hundred specimens of which, as I have told you, 8 or 9 are remarkable species. (April 17, 1921).

After a terrible drought we have now inundations and I fear I shall hardly find Odonata until next September (May 9, 1921).

Among the Fathers of the Sacred Heart of Santiago he found congenial collectors of insects and took part in the formation of an entomological society in that city in 1922. Many notes and questions on the Chilean dragonflies occupied his letters of these two years; the last that I have is dated July 14, 1922.

M. Rollinat tells us that by a letter which M. Martin dictated to his daughter January 4, 1924, he learned that his friend had been very ill since the beginning of the preceding year. He had been stricken with cerebral congestion followed by two later attacks. He spoke and walked with difficulty, his sight was very feeble, his faculties could no longer be applied to scientific researches and this distressed him extremely. His condition was irremediable and he passed away on August 20, 1925.

M. Rollinat, in his biographical notice already cited, gives a list of titles of Martin's writings, arranged according to the journals in which they appeared, but without quoting volumes or dates. The entomological papers deal with the Trichoptera, Perlidae and Lepidoptera of France, as a whole or in part, but are concerned chiefly with the Odonata. Of these last, 42 are known to me, but my list is not complete, to judge from that

given by M. Rollinat; 5 relate to the French fauna (1888-89), 1 to that of Cyprus (1894), 1 to Turkey (1921), 1 Syria (1909), 1 Algeria (1901), 4 West Africa (1905-1912), 2 East Africa (1907, 1915), 2 Africa in general (1910, 1912), 1 Seychelles (1896), 2 Indo-China (1904, 1910), 1 New Guinea (1908), 1 Australia (1901), 1 Colombia and Ecuador (1896), 1 Argentine and Paraguay (1896), 2 to Chili (1921, 1924); 6 contain descriptions of new species and varieties from various, often widespread, localities, including a number in South America (1895, 1898, 1900, 1902, 1907, 1921); 1 gives data on the hibernation of *Sympecma fusca* in the imago stage in France (1887), 4 list birds in whose stomachs Odonata have been found in different parts of the world (1891, 1910, 1911); 1 mentions Odonata found destroying injurious insects (1897); 2 are of monographic nature, on the Cordulines (1906) and the Aeschnines (1908-09) respectively, in the Catalogue of the zoological collections of Baron E. de Selys Longchamps, and 1 treats of the Aeschninae in Wytsman's *Genera Insectorum* (1911), the only group of Odonata which has appeared in that series. Alone, or in collaboration with M. Rollinat, he also published on the vertebrates of the department of Indre, France. Reference to the *Zoological Record* for the years above quoted will enable those interested to find the journals in which these papers were published.

Martin's work on the Odonata was mainly descriptive taxonomic. He described 165 species or subspecies and 18 genera as new. In his monographic works he adhered rather closely to the schemes of classification proposed by de Selys. Of his fascicule on the Cordulines in the Selys Catalogue, he wrote: "This fasciculus is almost a reproduction of de Selys' Synopsis; the Aeschnines, on the contrary, will be a complete monograph of the family" (Feb. 18, 1907). Nevertheless his *Cordulines* was a direct stimulus to the new arrangements suggested by Mr. E. B. Williamson[4] and Prof. J. G. Needham.[5] In the Aeschnines he appears to have overlooked a number of characters by which species in the genera allied to *Gynacantha* may be distinguished from each other, resulting in the association of a number of species under one specific name,[6] while his

arrangement of genera has been modified by Prof. Walker.[7]

M. Martin played an important part in the distribution of specimens of both imagos and larvae of Odonata from diverse parts of the world to those engaged in their study. He collected the exuviae of the French species assiduously, yet never published anything but general statements on the early stages of these insects. In him there passed away a man of great kindliness and willingness to help his correspondents.

"To my good friends and mentors in Odonatology, M. René Martin and Dr. F. Ris, I dedicate this book in memory of many kindnesses received from them," is the inscription in Dr. R. J. Tillyard's *Biology of Dragonflies.* PHILIP P. CALVERT.

(The photograph reproduced on Plate IV is of 1904, the autograph of June 30, 1891.)

Rocky Mountain Conference of Entomologists.

Notices have been sent out to the effect that the Fifth Annual Meeting of the Rocky Mountain Conference of Entomologists will be held August 15 to 20, 1927, in Pingree Park, as have the previous meetings. The entire week will be spent in the mountains, making the occasion a combination of pleasure and business. The program will be arranged so that all can have time for collecting and pleasure trips. All members of the family are invited. Transportation to the Park, which is about 50 miles from Fort Collins, will be available and the expense for the accommodations for the week will be at actual cost. Besides the regular papers, the topics of which will be announced later, there will be two symposiums, one on "Problems in Apiculture", and the other on "The History of and Recent Developments in Economic Entomology." Details in regard to arrangements will be sent out to anyone interested. If it is at all possible for any of the entomologists reading this notice to be in attendance, they should get in touch with the secretary at an early date.

GEORGE M. LIST, *Secretary,*
Rocky Mountain Conference of Entomologists,
Colorado Agricultural College, Fort Collins, Colo.

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[4] Ent. News, xix, pp. 428-431, Nov., 1908.
[5] Annals Ent. Soc. Amer. i, pp. 273-280, Dec., 1908.
[6] See Williamson, Misc. Publ. No. 9, Univ. Mich. Mus. Zool., pp. 8-11, July 2, 1923.
[7] The N. Amer. Dragonflies of the genus Aeshna, pp. 15-25, 1912.

Acetropis americana, a New Species of Miridae from Oregon (Hemiptera).*

By HARRY H. KNIGHT, Ames, Iowa.

The species here described represents the first *Acetropis* recorded from the Nearctic region. Four species of the genus have previously been known, all from the Palaearctic region.

Acetropis americana new species.

Allied to *carinatus* H.S., but easily distinguished by the nonprojecting frons and feebly developed median carina of the pronotal disk. Very finely and minutely pubescent, similar to *carinatus* in this respect.

♂. Length 8 mm., width 2.1 mm. Head: width 1.02 mm., vertex .50 mm,; apex of frons at base of tylus only moderately prominent, not projecting as in *carinatus*; vertex rather sharply depressed; brownish to black, base of vertex pale each side of median line, a pair of smaller spots each side of frons near front margin of eyes. Rostrum, length 3.1 mm., reaching to middle of third ventral segment, brownish to black. Antennae: segment I, length .81 mm., brownish black, set with short, stiff, black hairs; II, 2.76 mm., cylindrical, or very slightly thicker apically, black; III, 1.57 mm., black, only very slightly more slender than II; IV, .74 mm., black.

Pronotum: length 1.06 mm., width at base 1.81 mm.; median carina of disk apparent but not prominent; expanded lateral margins reflexed to a vertical position on basal half but changing to near a lateral position at anterior angles. Scutellum much as in *carinatus*.

Hemelytra pale to brownish, longer than in *carinatus;* cuneus also much longer, its base starting at a point just above apex of genital segment. Membrane uniformly fusco-brownish, veins yellowish brown, a calloused line bordering vein near apex of larger areole, its length equal to half the length of cuneus. Legs fusco-brownish, tarsi and apices of tibiae blackish.

♀. Length 7.4 mm., width 3 mm. Head: width 1.06 mm., vertex .61 mm.; color rather uniformly yellowish. Rostrum, length 3.25 mm., reaching upon third ventral segment, yellowish, brownish on apical half. Antennae: segment I, length .95 mm., yellowish, set with short bristles; II, 3.55 mm., yellow-

*Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.

ish, ventral surface and the apical one-fifth black; III, 1.7 mm., black; IV, .77 mm., black.

Pronotum: length 1 mm., width at base 1.8 mm.; basal margin nearly transverse, lateral margins more sharply reflexed at anterior angles than in the male; median carina scarcely apparent; a black spot in the depression near anterior angles, a slight but apparent brownish ray behind each callus. Scutellum pale yellowish, slightly more convex than in the male.

Hemelytra of a rather uniform dull white color, opaque; embolar margins strongly reflexed like the lateral margins of the pronotum; cuneus only slightly deflexed; corium with an obsolete brownish stripe apparent on outer apical half. Membrane abbreviated, scarcely extending beyond apex of cuneus, pale or with a tinge of brownish, basal half of larger areole invaded with the same opaque white pigment as that of the corium. Legs and ventral surface rather uniformly yellowish, tarsi blackish.

Holotype: ♂, July, Corvallis, Oregon (A. C. Burrill); author's collection, *Allotype:* ♀, June 26, 1926, Corvallis, Oregon (C. J. Drake). *Paratypes:* ♂, taken with the type. 2♀, taken with the allotype.

Dr. Drake states that the female specimens were swept from dry grass, probably a wild oat grass. Apparently the season for this species was nearly over, since he took only three females during several minutes of sweeping the dry grasses.

As may be noted in the description, the female has a very different aspect from the male, but the same is true of the Palaearctic species, where two of the four species have each received names for both sexes. The female of *americana* agrees with the male in having the median pronotal carina nearly obsolete, the scarcely projecting frons, and in having similar pubescence.

Acetropis americana represents the migration into the Nearctic region of a genus which is primarily Palaearctic in distribution. It is another example of those forms which must have reached this continent by way of the Alaskan land connection, but at such a remote period that there has since been time to develop a species distinct from the original common ancestor.

Dru Drury, Silversmith and Entomologist of the Eighteenth Century.

By HARRY B. WEISS, New Brunswick, New Jersey.

The same year that Jonathan Wild, notorious "fence," public thief-taker, director and associate of thieves and a thief himself, was ushered out of this world by the executioner, Dru Drury was ushered in. Or, as the Dictionary of National Biography has it, Dru Drury was born February 4, 1725, in Wood Street, London. He was about three and a half months old when Wild made his ungraceful exit at Tyburn. Dru was one of eight children which his father had by one of his four wives, Mary Hesketh, and the only one who lived, the other seven dying young. His father was a silversmith, and Dru, in addition to being educated with some care, helped him in the business.

During the reign of Queen Anne, at which time Dru's father was active, much attention was given to the work of silversmiths and considerable success was achieved in design and execution. In fact, the Eighteenth Century opened with a dazzling display of silversmiths' art. This period soon passed, however, and was succeeded by one, lasting until the close of the century, in which much skill was expended upon ornamental gewgaws and upon the elaboration of snuff boxes, watches, clasps, etc. Detail and rococo style were rampant in gold and silver work, especially in France. Dru must have been familiar with the productions of this period and may have had some share in creating them. Brought up in an atmosphere of gold and silver art work and being of an enquiring mind, he probably was familiar with the work of the various famous artists in the precious metals.

In 1748, when he was twenty-three years old, two important things happened to him. He married Esther Pedley on June 7 and his father retired, relinquishing the business to him. By his marriage to Miss Pedley, a daughter of his father's first wife by her former husband, he came into the possession of several houses in London and Essex, together with the annual income of between £250 and £300 which they brought. About this time he became interested in entomology and the formation of

a collection. It was his custom for many years to insert advertisements in foreign papers, appealing for specimens to be either purchased or exchanged for others. In 1767 he met Fabricius, who was then in London, through Doctor Solander of the British Museum. Later, from 1772 to 1775, when Fabricius spent the winters in Copenhagen and the summers in London, Drury frequently met him and talked shop. Kirby and Linnaeus also thought highly of Drury, and named insects after him.

In 1770 Drury published the first of his three volumes of "Illustrations of Natural History," the title page bearing the following statement: "Illustrations of Natural History wherein are exhibited Upwards of Two Hundred and Forty Figures of Exotic Insects, According to their different Genera; Very few of which have hitherto been figured by any Author, Being engraved and coloured from Nature with the greatest Accuracy and under the Author's own Inspection, On Fifty Copper-Plates. With a particular Description of each Insect; Interspersed with Remarks and Reflections on the Nature and Properties of many of them. By D. Drury. To which is added A Translation into French. London: Printed for the Author, and sold by B. White, at Horace's Head in Fleet-street 1770."

According to the somewhat long-winded preface Drury was very religious and considered natural history and theology as inseparable. The text, which includes descriptions, localities, habits of some species, etc., is accompanied by fifty colored plates by Moses Harris, mostly illustrative of the Lepidoptera, although some plates are devoted to the Coleoptera, Orthoptera, Hymenoptera and Neuroptera. Volume II appeared in 1773 and volume III in 1782. More than two-thirds of all the illustrations are of Lepidoptera, and the majority of the plates were drawn and engraved by Harris. Some of the plates in the last volume were done by another artist.

Drury's work was well received by contemporary scientists. The Rev. William Kirby spoke of it as an "Opus entomologicus splendidissimus." Adrian Hardy Haworth, student of birds, plants and insects, author of many papers on natural history, who later founded, in 1802, the Aurelian Society which never

reached a membership of twenty, and who, upon its termination in 1806, was the leader in establishing the Entomological Society of London, afterwards absorbed by the Zoological Club of the Linnæan Society, called Drury's books "a most beautiful and valuable work on entomology." Sir James Edward Smith, physician and naturalist, author of several botanical publications and co-author with Abbot of the "Natural History of the rarer Lepidopterous Insects of Georgia," creator and first president of the Linnæan Society, said, "the exquisite work of Drury displays the complete insect in a degree of perfection that leaves nothing to be desired." In addition, it received praise from Linnaeus and Fabricius. In 1785, it was in part translated into German and annotated by G. W. F. Panzer.

In 1837, Henry G. Bohn, of London, published a new edition, edited with notes by Westwood and "brought down to the present state of Science, with the systematic characters of each species, synonyms, indexes and other additional matter," under the title "Illustrations of Exotic Entomology containing upwards of six hundred and fifty Figures and Descriptions of Foreign Insects." In the preface Westwood acknowledges the value of Drury's figures.

Drury purchased in 1771 the shop and stock of a silversmith at 32 Strand, where for some years he made nearly £2000 per year. Six years later, however, he failed, it is stated, through no fault of his own; but with the assistance of his creditors, whose confidence he possessed, he was able to start in business again the next year. Perhaps this failure was responsible for the long period that elapsed between the publication of volumes II and III of his "Illustrations of Natural History."

In 1787, after he had been married thirty-nine years, his wife died. He had seventeen children by her, but only three survived him, the rest dying young. The death rate among children in London during Drury's early married life was high, although it gradually declined later. One London writer said in 1757 that the diseases of infants recorded as "convulsions and chrysoms" were at their height between 1728 and 1757. "In and about London, a prodigious number of children are cruelly

murdered by those infernals called nurses. These infernal monsters throw a spoonful of gin, spirits of wine or Hungary water down a child's throat, which instantly strangles the babe. When the searchers come to inspect the body, and inquire what distemper caused the death, it is answered 'convulsions.' This occasions the articles of convulsions in the Bills so much to exceed all others." Although the causes of the deaths of Drury's children are not known, it is probable that they, like other children, suffered from the care, knowledge and sanitation customary and in existence at that time.

After Drury had been adding to his collection for 25 years and during that time spending upon it a total of no less than £4000, it contained in 1788, according to Westwood, 9,578 specimens representing 8,370 different species. Of this latter number, 2,136 belonged to the Coleoptera, 778 to the Hemiptera, 2,148 to the Lepidoptera, 171 to the Neuroptera, 533 to the Hymenoptera, 402 to the Diptera, 96 to the Aptera and over 2,000 to an English collection. Drury's collection was the richest and most complete of its time and quite famous. Donovan, naturalist, author, fellow of the Linnæan Society, and wealthy until he was nearly ruined by his booksellers, spoke of Drury's "noble and very magnificent collections." Smeathman was one of his best collectors, and in the preface of volume III of Drury's work frequent mention is made of Mr. Smeathman's observations.

Drury retired in 1789, at the age of 64, and turned his business over to his son. From then on he spent his time between London and Broxbourne. At Broxbourne he amused himself by collecting insects, fishing, gardening, making wines from various fruits and by experiments in distillation. He added to his collection, until at the time of his death, it contained some 11,000 species. About 1800 he published a small paper of about three pages entitled "Directions for Collecting Insects in Foreign Countries" which he sent all over the world and which was translated into several languages. Hagen says that Drury offered one sixpence for every insect the size of a honeybee or

larger. Drury corresponded with Pallas,* the German naturalist, traveler, and explorer in Russia for the empress Catharine, and with the younger Linnaeus, Charles, said to have been abominated by his mother and subjected from childhood to amazing unmaternal attention.

Drury's speculations concerned with the possibility of obtaining gold led him to induce many travelers to join his proposals, which usually turned out unsatisfactorily to all parties. In 1801 he published "Thoughts on the Precious Metals, particularly Gold, with directions to Travelers, &c, for obtaining them, and selecting other natural riches from the rough diamond down to the pebble-stone. According to this he was an F. L. S., and "goldsmith to her majesty." The directions are varied and extend from "clothing and diet to crystallography."

He finally moved to Turnham Green and his health became very poor. He died of stone, December 15, 1803, and was buried in the church of St. Martin's-in-the-Fields, London. His collection was sold at auction on May 23, 1805, many insects being bought by Donovan, although various lots were purchased by Mac Leay, Kirby, General Davies, G. Humphrey and others. The total amount obtained for the insects was a little over £614, and his cabinets, books and copper plates brought about £300 more. Mac Leay paid £8 for 13 species of *Buprestis,* Donovan £4 and one shilling for *"Sphinx convolvuli,* and eight others," and various amounts are recorded for other purchases.

It is written that Drury was a man of high honor, of upright character and quite religious. These, however, are not uncommon virtues, and his chief claim to fame lies in his authorship of the three volumes of "Illustrations of Natural History," especially the colored plates which were done by Moses Harris. Drury apparently was one of the well-to-do enthusiastic amateurs, who occasionally flourish in entomological circles, riding their hobbies furiously, spending their money lavishly, or what appears to be so to those not so well off financially, acquiring a profound knowledge of their subjects and occasionally mak-

*Prof. T. D. A. Cockerell in his interesting article, "Dru Drury, An Eighteenth Century Entomologist," (Scientific Monthly, vol. XIV, Jan., 1922) includes extracts from some thirty letters which Drury wrote to Pallas, Moses Harris, Linnaeus, etc.

ing more contributions to science than some of their professional and supposedly more erudite brothers, but withal, because they are not within the official circle, often not gaining quite the recognition they deserve. Drury collected earnestly and actively, and his cabinet, containing as it did many unique specimens, excited the interest and admiration of contemporary entomologists and led to contacts and correspondence with them.

Drury lived in an age of numerous social distinctions. Various trades had their own customs, their own localities, and lines were drawn more or less successfully between the different classes of workers and trades. As the owner of a successful silversmith's shop, Drury supplied some of the wants of a large luxury-liking population and undoubtedly enjoyed some local distinction, perhaps more than local if he were "goldsmith to her majesty." As a London business man he was familiar with the outward aspects of the city, so interestingly described early in the century in Gay's "Trivia": dandies in gilded chairs, Pall Mall with its perfumed shops and decorated windows, the fruit market of Covent Garden, Billingsgate fish-wives hawking their wares, untidy butchers with greasy trays, vendors of mackerel, plums, pears and other seasonable foods, shoplifters, cutpurses, card sharpers, pickpockets being chased through the crowd, chimney sweeps leaving sooty stains in their wake, brewers unloading their wares into cellars, gayly dressed ladies on the Mall, poor wretches in the pillories, drunken chairmen, Thames street stinking with the smell of stale fish, tallow making and piles of cheese, Drury Lane infested by "fair recluses" and other sights and sounds incidental to London life. As a prosperous silversmith and living so close to them, such sights and sounds probably fascinated him not at all, and some may have offended his religious sensibilities. Nevertheless, he contributed his share to and was part of the encompassing atmosphere of the time. Although his entomological descriptions may have lacked scientific precision, his work had a part in advancing the science and in adding to the then existing knowledge of insect distribution. Entomology owes much to its amateurs.

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Collecting Experiences (Lepid. : Noctuidae).

By ALEX K. WYATT, Chicago, Illinois.

In the course of an active collecting experience of over thirty years, it is inevitable that one will experience an occasional thrill, whether it be caused by an unusual discovery or an untoward incident, that creates a bit of excitement at the time.

One such thrill occurred to my friend and fellow collector, Mr. Emil Beer, in July, 1926, on a trip to Hessville, Indiana, after larvae of *Papaipema inquaesita.* Hessville was formerly one of our favorite collecting places, but much of the territory now has been subdivided and sold. It was originally a series of sandy, partly wooded ridges, separated by sloughs. Parts of these sloughs, patches of timber and a few waste spots still remain.

On a bright July day, that country is hot, very hot, and in a wet summer such as we had in 1926, mosquitoes are myriad in number. Digging for larvae of *inquaesita* in the roots of the sensitive fern is hard work at any time and particularly so under such conditions. Friend Beer persevered however and found a dozen or more. Hot, sweaty and tired and with a long three-hour ride on the street cars in prospect, he trudged off toward the highway.

It was nothing unusual and only a good *Papaipema* collector's habit to give just a little more than an ordinary glance at some royal ferns along the path. All feeling of lassitude disappeared in an instant, for the evidence of *Papaipema* was unmistakeable. As luck would have it, the first larva was crushed in making a closer examination. Two other roots showed signs of larvae and were dug up and bagged. It was too late to make a more extended search but the thought of having again found *P. speciosissima* made him feel fully repaid for the strenuous labor of the day. Later it developed that he was doubly repaid because four specimens developed from the two root clumps, instead of the two he expected. Incidentally it might be stated that the roots of the royal fern, *Osmunda regalis,* are exceedingly hard and tough and without a hatchet or similar instrument, it is a difficult job to dig one up.

The food plant of *P. speciosissima* was first discovered by Mr. Otto Buchholz of Elizabeth, New Jersey as mentioned by Mr. Henry Bird in describing the life history (Can. Ent. XLVII p. 145). I found a single larva at Hessville in 1914 and succeeded in rearing it to maturity. Diligent search for several years thereafter failed to turn it up again, probably due to extensive fires which occurred about that time.

A male and a female of the four specimens bred in 1926 by Mr. Beer were of the usual form with the ordinary spots white. The other pair was without white markings. This unmarked form, or rather dark spotted form, seems to be rare. Buchholz, who reared *speciosissima* in considerable numbers, found only two without white spots and it seems odd that of only four specimens found together here, two should be of this form. The one I bred in 1914 was a white spotted male.

A New Form of Papaipema speciosissima (Lepid.: Noctuidae).

By Alex K. Wyatt and Emil Beer.

The dark spotted form of *Papaipema speciosissima* mentioned in the preceding article has never been named and with the approval of Mr. Henry Bird, our mentor in the study of

the Papaipemae and their life histories, we propose for it the name "regalis." It is a truly royal species, its large size and bright color setting it out prominently among its congeners.

Papaipema speciosissima, G. & R., form **regalis,** new form.

Size, color and maculation similar to the typical form, except that the usual white marked reniform, orbicular and claviform are replaced by dark spots varying in depth of color from a purplish shade concolorous with the darker portions of the subterminal area, to a deep sooty black. Expanse, 47 to 55 mm.

Type male in collection A. K. Wyatt, from Hessville, Indiana, bred September 5, 1926.

Paratypes in collections Emil Beer, Dr. Wm. Barnes and Otto Buchholz.

Described from male type and four paratypes, 1 female IX-21, Hessville, Indiana; 1 female VIII-14, N. Arlington, New Jersey; 1 male IX-30 and 1 female IX-14, Hudson County, New Jersey.

Mr. Henry Bird writes that he has seen a very black spotted specimen, taken at light, at Buffalo, New York.

Congeneric and Intergeneric Pederasty in the Scarabaeidae (Coleop.).

By W. P. Hayes, University of Illinois.*

Berlese in his recently issued second volume of *Gli. Insetti* summarizes (p. 503) briefly the present knowledge of sexual perversion among insects in which homosexual coupling occurs among individuals of the same sex and belonging to the same species and among males of different species, as well as heterosexual instances of mating between males and females of different species, genera and even families. He points out that these physiological abnormalities do not occur frequently. Certain pairings are obviously infertile but in others, such as interspecific or intergeneric crossings, fertilization results in the production of hybrids, advantage of which is taken to further the work of insect geneticists.

* Contribution No. 108 from the Entomological Laboratories of the University of Illinois.

Berlese cites the following cases of the crossing of males and females belonging to different species in which the production of hybrids is not possible: Among congeneric species—*Mclasoma populi* and *M. aenea; Cryptocephalus labiatus* and *C. nitidus; Melolontha melolontha* and *M. hippocastani.* Among species belonging to different genera he notes—*Strophosomus coryli* and *Sciaphilus asperatus; Phosphænus hemipterus* and *Lampyris noctiluca; Epicometis* and *Anisoplia villosa.* These pairs of species belong in the same family, but interfamily crossing may occur as has been noted by the mating of *Donacia simplex* (Chrysomelidæ) and *Attelabus coryli* (Curculionidæ) and that of *Rhagonycha* (*Telephorus*) *fulva* (Cantharidæ) and *Clytanthus varius* (Cerambycidæ).

Homosexual perversion, in which members of the same sex are attracted to each other, is said by Berlese to be not rare, and occurs in such insects as *Bombyx mori,* in which the cause for such a condition is attributed by him to some special condition, such as a lack of females or a debility of the male. A case of homosexual perversion is recorded by DeKerville[1] who notes and figures the apparent mating of two males of *Melolontha vulgaris,* F. and cites three similar cases of the same species recorded by Laboulbene (1859), Maze (1884) and Noel (1895). DeKerville describes one male as assuming the *"role actif"* and the other assuming the *"role passif."*

The writer has frequently observed two interesting types of pederasty (abnormal sexuality) in the species *Ochrosidia* (*Cyclocephala*) *immaculata* (Oliv.) during the course of life history studies in Kansas. Quite often males of this species were observed to attempt mating with males of the same species and in several instances the genital organs of the active males were inserted within the anal opening of the passive male. The active specimen clung tightly to the edges of the elytra of the passive male and was carried about in the rearing cages in which they were confined.

More interesting acts of this nature were observed several times during June and July, 1920, in which males of *Ochrosidia immaculata* Oliv. were seen to be vainly attempting to mate

[1] DeKerville, H. G. Perversion sexuelle chez des Coleopteres males. Bull. Soc. Ent., France for 1896, p. 85.

with males of *Polyphylla hammondi* Lec. a species nearly three times as large as the *Ochrosidia* which always took the active rôle. The tarsi of the latter species were firmly clasped under the elytra of the *Polyphylla* and frantic efforts were made to effect a coupling. The *Ochrosidiae* were persistent in their attempts, often remaining on the *Polyphylla* for 15 or more minutes. These abnormal conditions were always noted to occur in large collecting tins in which large numbers of various species of Scarabæidæ had been collected the previous evening. In each case females were always present but were ignored by the males.

A similar case occurring between two species of different genera has previously been recorded by the writer[2] in which a male *Catalpa lanigera* Linn. was noted attempting to mate with a male *Pelidnota punctata* Linn.

DeKerville (loc. cit) points out the two possible conditions under which such perversion occurs and designates them as *pederastie par goût and pederastie par nécessité*. The instances here recorded were apparently those of choice and not of necessity since females were generally present. *Pederastie par goût* may be defined as coupling between males in the presence of unfertilized females while *pederastie par nécessité* results from the absence of females.

It is apparent that the above terms have some justification in their use, but a more needed set of terms is desired to distinguish the types of homosexuality within the species from those occurring between different genera and accordingly the descriptive term *congeneric pederasty* is proposed for homosexuality of individuals belonging to the same species, such as has just been cited for *Ochrosidia* males, and *intergeneric pederasty* where it occurs between species of different genera as cited in the case of *Ochrosidia* and *Polyphylla*. So far as the writer is aware no cases are recorded of homosexual perversion between species of different families, but if males and females of such diverse groups can cross as quoted above from Berlese, it is not unreasonable to suppose that individuals of the same sex might attempt interfamily pederasty.

[2] Hayes, W. P. A comparative study of the life history of certain phytophagous scarabaeid beetles. Kans. Agr. Exp. Sta., Tech. Bull. 16, p. 99, 1925.

ENTOMOLOGICAL NEWS

PHILADELPHIA, PA., JULY, 1927.

Figures and Descriptions.

THE EDITOR, ENTOMOLOGICAL NEWS: The policy almost universally followed by editors of Entomological Journals in America of charging the author for plates and figures puts a premium on the publication of unidentifiable descriptions. It would be better if the editors would make a charge of at least $5.00 a species for all descriptions unaccompanied by adequate figures and use this money to pay for the plates of those authors who have enough energy and interest in the subject to prepare suitable figures. The present system places a premium on superficial work and imposes a penalty on thorough work.—C. R. CROSBY, Ithaca, New York.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE

Personals.

The following announcements concerning entomologists have appeared in *Science* of May 13 to June 10, 1927:

Prof. W. M. Wheeler has been awarded the Dollfus prize of the Entomological Society of France.

Prof. G. H. F. Nuttall, of Cambridge University, who delivered the annual public lecture of the Entomological Society of America in Philadelphia, in December, 1926, has been made professor *honoris causa* in the University of Strasbourg.

Miss Edith W. Mank, of Lawrence, Massachusetts, has been awarded by the Boston Society of Natural History a second Walker prize in Natural History, of fifty dollars, for a manuscript entitled "The Life History of *Baris scolopacea* Germ. (Coleop.)

Edwin H. Bryan, Jr., formerly entomologist on the staff of Bishop Museum, Honolulu, has succeeded Dr. Stanley C. Ball as curator of collections.

Dr. Melville H. Hatch has been appointed assistant professor of zoology at the University of Washington.

Dr. R. J. Tillyard has been elected an honorary member of the Entomological Society of Belgium.

Dr. Wardle, lecturer in economic entomology in the University of Manchester, will offer advanced courses in the division of entomology, University of Minnesota, next year.

Dr. Karl Jordan, permanent secretary of the International Congresses of Entomology has been visiting entomological centres in the eastern United States.

Collecting Expeditions.

Dr. J. M. Aldrich will collect Diptera in half a dozen States west of the Great Plains this summer.

Mr. J. O. Martin and Mr. E. P. Van Duzee, of the California Academy of Sciences, will collect insects, especially Coleoptera and Hemiptera, in the Panhandle of Texas, and in the Sierra Nevadas, respectively. Prof. George Haley, of St. Ignatius College, San Francisco, and Mr. G. C. Harrold, of Winnipeg, will collect insects and other animals on Nunivak Island, Bering Sea, under the auspices of the same Academy. (*Science*, June 3, 10, 1927.)

An entomological survey especially of the islands of the Pacific is being planned by the Bishop Museum, Honolulu, and the Hawaiian Sugar Planters Association, with the probable coöperation of other groups. Dr. C. F. Baker is to be the scientific head of the survey, with headquarters in Honolulu. (A. L. Dean in *Science*, June 10, 1927.)

The 1000th Meeting of the Jugatae.

The One Thousandth Meeting of the entomological society of Cornell University was held on Saturday, May 28th. This society, under the name Jugatae, was founded on February 26, 1897, and its members are chiefly graduate students in entomology and members of the department of entomology.

Recent Additions to the British Museum.

E. Brunetti recently presented to the department of entomology of the British Museum of Natural History a collection of some 60,000 specimens of Diptera, especially rich in Indian and North American material. The collection is the result, in part, of the entomological collecting done by Mr. Brunetti during the last forty years. The same department has also received, under the terms of the will of the late Lieutenant-Colonel F. R. Winn Sampson, a collection of insects of the group Scolytidae (bark-beetles). The collection consists of some 11,000 insects and 1400 microscopic preparations, and the bequest includes a selection of books, pamphlets and two microscopes. (*Science*, March 4, 1927.)

Entomological Literature

COMPILED BY E. T. CRESSON, JR.

Under the above head it is intended to note papers received at the Academy of Natural Sciences, of Philadelphia, pertaining to the Entomology of the Americas (North and South), including Arachnida and Myriopoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species will be recorded.

The numbers in **Heavy-Faced Type** refer to the journals, as numbered in the following list, in which the papers are published.

All continued papers, with few exceptions, are recorded only at their first installments.

Papers of systematic nature will be found in the paragraph beginning with (N). Those pertaining to Neotropical species only will be found in paragraphs beginning with (S). Those containing descriptions of new forms are preceded by an *.

For records of Economic Literature, see the Experiment Station Record, Office of Experiment Stations, Washington. Also Review of Applied Entomology, Series A, London. For records of papers on Medical Entomology, see Review of Applied Entomology, Series B.

Papers published in the Entomological News are not listed.

1—Trans., American Ent. Soc., Philadelphia. **4**—Canadian Ent., Guelph. **5**—Psyche, Cambridge, Mass. **6**—Jour., New York Ent. Soc., New York. **8**—Ent. Monthly Mag., London. **10**—Proc., Ent. Soc., Washington. **11**—Deutsche Ent. Zeitschrift, Berlin. **12**—Jour. of Economic Ent. **14**—Ent. Zeitschrift, Frankfurt a. Main. **16**—The Lepidopterist. **17**—Entomologische Rundschau, Stuttgart. **18**—Intern. Ent. Zeitschrift, Guben. **19**—Bull., Brooklyn Ent. Soc. **21**—The Entomologist's Record, London. **23**—Boll., Laboratorio Zool. Gen. e Agr., Portici. **24**—Ann. Soc. Ent. France. **25**—Bull. Soc. Ent. France. **26**—Ent. Anzeiger, Wien. **39**—The Florida Entomologist. **43**—Proc. Ent. Soc. British Columbia. **44**—Zeit. f. Wissenschfl. Insektenbiol., Berlin. **49**—Ent. Mitteilungen, Berlin. **51**—Notulae Ent., Helsingfors. **58**—Ent. Berichten, s'Gravenhage. **59**—Encyclopedie Entomologie, Paris. **61**—Proc., California Acad. Sci. **63**—Deutsche Ent. Zeitschr., "Iris," Dresden. **79**—Koleopterolog. Rundschau, Wien. **80**—Lepid. Rundschau, Wien. **81**—Folia Myrmec. et Termit., Berlin. **103**—Proc. Zool. Soc. London. **111**—Archiv f. Naturgeschichte, Berlin. **131**—Ent. Blätter, Berlin. **137**—Archiv f. Zoologi, Stockholm. **138**—American Mus. Novitates. **139**—Bull. Southern Cal. Acad. Sci., Los. Angeles.

GENERAL.—Bodenheimer, F. S.—Ueber regelmässigkeiten in dem wachstum von insekten. I. Das längenwachstum. (**11**, 1927, p. 33-57, ill.) **Brues, C. T.**—Animal life in hot springs. (Quar. Rev. Biol., ii, p. 181-203, ill.) **Brues, C. T.**—Observations on wood-boring insects, their parasites and other associated insects. (**5**, xxxiv, p. 73-90.) **Cappe de Baillon, P.**—Recherches sur la tératologie des insectes. (**59**, (A), viii, 287 pp. ill.) **Comstock, J. A.**—Protective

coloration and mimicry. (139, xxvi, p. 1-4, ill.) **Forbes, S. A.**—The general entomological ecology of the Indian corn plant. (Ill. Dept. of Regis. and Educ. Bull., xvi, p. 447-457.) **Gebien, H.**—Sollen spezialsammlungen von insekten in museen gesondert aufgestellt werden? (11, 1927, p. 26-31.) **Horn, W.**—Et. meminisse et vacicinari liceat. Ueber infernale entomologen II. (49, xvi, p. 93-98.) **Keiffer, H. H.**—[Remarks on the California Academy of Sciences expedition to the Revillagigedo Islands, Mexico.] (Proc. Pac. Coast Ent. Soc., ii. p. 67-69.) **Knisch, Alfred.**—Ein nachruf von F. Heikertinger. (79, xiii, p. 86-88.) **Knoch, V.**—Alte und neue bekämpfungsmethoden gegen insektenschädlinge. (18, xxi, p. 33-35.) **Legewie, H.**—Hauptprobleme des insektenstaates. I. Geschlechtsbestimmung, verwandtschaftsverhältnisse und staatenbildung. (11, 1927, p. 1-25.) **Lochhead, W.**—Obituary. (4, lix, p. 121-122.) **McAtee, W. L.**—Notes on insect inhabitants of bird houses. (10, xxix, p. 87-90.) **Martin, Rene.**—Notice nécrologique par L. Berland. (24, xcvi, p. 27-30.) **Meyrick, E.**—Phytophagic or biological races in insects. (Nature, cxix, p. 782.) **Mueller, A. Julius.**—Obituary notice by F. Heikertinger. (79, xiii, p. 89.) **Poche, F.**—Was verstehen die internationalen nomenklatur-regeln unter binärer nomenklatur? (14, xxxxi, p. 81-84, cont.) **Puengeler, Rudolf.**—Obituary. (63, xli, p. 1-4, port.) **Richmond, E. A.**—A new phototropic apparatus. (12, xx, p. 376-382, ill.) **Rohwer, S. A.**—The need for definitely indicating new synonymy and new combinations in taxonomy. (Science, lxv, p. 526.) **Schroeder, C.**—Handbuch der entomologie. (Lief. 25-26, p. 481-610, ill.) **Schumann, E.**—Zum industriemelanismus. (18, xx, p. 443-444.) **Wade, J. S.**—Some insects of Thoreau's writings. (6, xxxv, p. 1-20, ill.) **Walther, H.**—Ueber melanismus. (63, xli, p. 32-49.) **Weiss, H. B.**—Sir John Hill's "Decade of Curious Insects." (6, xxxv, p. 83-88, ill.) **Weiss, H. B.**—Insects captured in the lookout stations of New Jersey. (New Jersey Dept. of Agric. Circ. 106, 3-21 pp. ill.) **Weiss, H. B.**—Thomas Moffett, Elizabethan physician and entomologist. (Sci. Monthly, June, 1927, p. 559-566, ill.) **Wolff, M.**—Ueber die mikroskopische untersuchung genadelter objekte und ein neues universalmikroskop für entomologische zwecke. (131, xxiii, p. 36-40, ill.)

ANATOMY, PHYSIOLOGY, ETC.—**Eggers, F.**—Nähere mitteilungen über das johnstonsche sinnesorgan

und über das ausweichvermögen der taumelkäfer. (Zool. Anz., lxxi, p. 136-156, ill.) **Golowinskaja, X.**—Das auftreten von mosaikformen bei Lymantria dispar unter dem einfluss ultravioletter strahlen. (Biol. Zentralbl., xlvii, p. 193-201, ill.) **Hasebroek.**—Tatsachen und kritik in fragen des industrie-und grosstadtmelanismus. (**18,** xxi, p. 25-30, ill.) **Hepp, A.**—Eulenfalter mit löchern in den flügeln. (**80,** i, p. 93.) **Jones & Hepburn.**—Observations on the pitcher plant liquor of the Sarraceniaceae. (Trans. Wagner Free Inst. Sci., Phila., xi, p. 35-48.) **Ju-Chi Li.**—The effect of chromosome aberrations on development in Dros. melanogaster. (Genetics, xii, p. 1-58.) **Spooner, C. S.**—A study of the catalase content of codling moth larvae. (State Ill. Dept. of Regis. and Educ. Bull., xvi, p. 443-446, ill.) **Wen, D.**—Precocita di sviluppo e tendenza alla partenogenesi nei bachi da seta (Bombyx mori) di razza gialla indigena. (Bol. Soc. Nat., Napoli, xxxvii, p. 135-163, ill.)

ARACHNIDA AND MYRIOPODA.—Berland, L.—Le venin des araignées. (Rev. Sci., lxv, p. 267-271, ill.) **Folkmanova, B.**—Einführung neuer unterscheidungsmerkmale in die systematik der Lithobiiden. (Zool. Anz., lxxi, p. 181-192, ill.) **Locket, G. H.**—Observations on the mating habits of some web-spinning spiders. (**103,** 1926, p. 1125-1146, ill.) **Stiles & Hassall.**—Key-catalogue of the crustacea and arachnoids of importance in public health. (U. S. Hyg. Lab. Bull., 148, p. 197-289.) **Thor, S.**—Vorläufige revision der gattung Hygrobates mit phylogenetischen bemerkungen. (Norsk Ent. Tids. ii, p. 118-148, ill.)

(N) ***Oudemans, A. C.**—Acarologische Aanteekeningen LXXIV. (**58,** vii, p. 176-180.) **Strand, E.**—Catalogue des Arachnides que j'ai decrits jusq'à l'année 1926. (**111,** 1925, A, hft. 8, p. 1-61.)

(S) ***Oudemans, A. C.**—Notizen über acari, (Oribatidae). (**111,** 1925, A, hft. 8, p. 120-147, ill.)

THE SMALLER ORDERS OF INSECTA.—Byers, C. F.—Notes on some American dragonfly nymphs (Odonata, Anisoptera). (**6,** xxxv, p. 65-74, ill.) **Pearman, J. V.**—Notes on Pteroxanium squamosum and on eggs of the Atropidae (Psocoptera). (**8,** lxiii, p. 107-111, ill.) **Ryvez.**—L'entomologie des mouches a triutes. Les insectes neuropteres. (La Nature, 1927, p. 460-461, ill.) **Snyder, T. E.**—Termites modify building codes. (**12,** xx, p. 316-321, ill.)

(N) *Banks, N.—Revision of the Nearctic Myrmeleonidae. (Bull. of the Mus. of Comp. Zool. lxviii, 3-84 pp., ill.) *Handschin, E.—Collembolen aus Costa Rica. (49, xvi, p. 110-118, ill.) *McDunnough, J.—Notes on the species of the genus Hexagenia with description of a new species (Ephemeroptera). (4, lix, p. 116-120.)

(S) *Esben-Petersen, P.—New and little-known species of Mecoptera and Neuroptera in the Zoological Museum of Helsingfors. (51, vii, p. 13-18, ill.) *Longinus Navas, R. P.—Insecta nova. (Mem. Acad. Sci. N. Lincei, (2), ix, p. 101-110, ill.)

ORTHOPTERA.—Crampton, G. C.—The thoracic sclerites and wing bases of the roach Periplaneta americana and the basal structures of the wings of insects. (5, xxxiv, p. 59-72, ill.) Burr, M.—Note on the antiquity of some orthopterous groups. (21, xxxix, p. 75-77.) Fry, H. J.—Grasshopper culture in the laboratory. (6, xxxv, p. 41-50, ill.) Morse, A. P.—Another vagrant grasshopper. (5, xxxiv, p. 134.)

(S) *Hebard, M.—Studies in the Tettigoniidae of Panama. (1, liii, p. 79-156, ill.)

HEMIPTERA.—Abbott, C. E.—The reaction of Datana larvae to sounds. (5, xxxiv,. p. 129-133.) Hungerford, H. B.—The life history of the creeping water bug, Pelocoris carolinensis (Naucoridae). (19, xxii, p. 77-82, ill.) Ivanov, S. P.—Beiträge zur kenntnis des geschlechtsapparats der Homoptera Cicadoidea. [Russian] (Revue Russe D'Entomologie, xx, p. 210-227, ill.) Kerkis, J.—Zur kenntnis des inneren geschlechtsapparates der wasserbewohnender Hemiptera-Heteroptera. [Russian] (Revue Russe D'Entom., xx, p. 296-307, ill.) Knight, H. H.—On the Miridae in Blatchley's "Heteroptera of Eastern North America." (19, xxii, p. 98-105.) McGregor & Newcomer.—The true identity of the citrus mite. (12, xx, p. 429.) Reinhard, H. J.—The influence of parentage, nutrition, temperature, and crowding on wing production in Aphis gossypii. (Texas Agric. Exper. Sta. Bull. no. 353, p. 5-19.) Schneider-Orelli und Leuzinger.—Untersuchungen über die virginoparen und sexuparen geflügelten der blutlaus des apfelbaumes. (Vierteljahrs. Naturf. Ges. Zürich, lxxi, Beibl. No. 9, 84 pp., ill.) Waterston, J.—On the crop contents of certain Mallophaga. (103, 1926, p. 1017-1020, ill.)

(N) Ball, E. D.—The genus Clastoptera (Cercopidae). (4, lix, p. 103-112.) Downes, W. A.—A preliminary list of

the Heteroptera and Homoptera of British Columbia. (**43,** 1927, 5-22 pp.) **Hungerford, H. B.**—Trichocorixa and not Corixa for the genus of Corixidae found in America. (**19,** xxii, p. 96.) **Poisson, R.**—Sur la systematique des Corixidae remarque sur Neocorixa (non Arctocorisa) vermiculata. (**25,** 1927, p. 74-75.)

(S) ***Dozie, H. L.**—A new Fulgorid from Porto Rico. (**6,** xxxv, p. 53-54, ill.) ***Drake, C. J.**—Two undescribed Tingitids from Mexico. (**19,** xxii, p. 116-117.) ***Schmidt, E.**—Neue zikaden-gattungen und arten. (**111,** 1925, A, hft. 8, p. 147-159.)

LEPIDOPTERA.—Bird H.—The fern-feeding species of Papaipema. (**4,** lix, p. 92-96.) **Hepp, A.**—Biologische beobachtungen (Grossschmettelinge). (**80,** i, p. 79-80.) **Kosminsky, P.**—Die entwicklung der antennen bei intersexuellen weibchen von Lymantria dispar. (Biol. Zentralbl., xlvii, p. 243-249, ill.) **Lenz, F.**—Ueber die zucht der gabelschwanzarten. (**18,** xxi, p. 17-22.) **Zikán, J. F.**—Biologie der Heliconisa-arten (Saturnid.). (**11,** 1927, p. 58-82, ill.)

(N) **Ainslie, G. G.**—Additions and corrections to the list of the Crambinae of Florida. (**39,** xi, p. 12-14.) ***Barnes & Benjamin.**—A new race of Arctia caja. (**139,** xxvi, p. 5.) ***Cassino, S. E.**—Some new Geometridae. (**16,** iv, p. 57-72.) ***Cassino, S. E.**—New Geometrids. (**16,** iv, p. 73-80.) ***Chermok, F.**—New forms of Lepidoptera. (**19,** xxii, p. 118-119.) ***Cockerell, T. D. A.**—A new aberration of Basilarchia weidemeyrii. (**139,** xxvi, p. 5.) **Criddle, N.**—Lepidoptera reared in Manitoba from poison ivy. (**4,** lix, p. 99-101.) ***Forbes, W. T. M.**—The genus Melinaea with a description of a new species (Ithomiinae). (**6,** xxxv, p. 23-36, ill.) ***Hill, C. A.**—Three new moths from the southwest. (**139,** xxvi, p. 6-7.) ***Morrill, A. W.**—Description of a new cotton infesting species of Bucculatrix. (**10,** xxix, p. 94-97, ill.)

(S) ***Biedermann, R.**—Descriptions de Rhopalocères Américains nouveaux. (**59,** (B), Lep., p. 59-68, ill.) ***Hering & Hopp.**—Neue Limacodiden aus Südamerika. (63, xli, p. 4-9, ill.) **Hoffmann, F.**—Entomologisches allerlei aus Brasilien. (**14,** xxxxi, p. 50-53, cont.) ***LeMoult, E.**—Description de formes peu connues ou nouvelles des genres Papilio, Agrias, Morpho et Teracolus. (**59,** (B), Lep., p. 69-72.) ***Niepelt, W.**—Neue exotische Rhopaloceren. (**18,** xxi, p. 49-53.) **Schade, F.**—Entomologische skizzen aus Paraguay. IV. Sphingiden. (**17,** xliv, p. 20.) ***Schaus, W.**—New species of lepidoptera from South America. (**10,** xxix, p. 73-82.)

DIPTERA.—Cole, F. R.—A study of the terminal abdominal structures of male diptera. (**61,** xvi, p. 397-499, ill.) **Perfiljev, P.**—Zur anatomie der Phlebotomusarten. [Russian] (Revue Russe D'Entom., xx, p. 308-319, ill.)

(N) ***Alexander, C. P.**—Records and descriptions of crane-flies from the eastern United States. (Tipulidae.) (**6,** xxxv, p. 55-63.) ***Alexander, C. P.**—Undescribed species of the genus Limnophila from western North America. (Tipulidae.) (**19,** xxii, p. 110-115.) ***Curran, C. H.**—Descriptions of nearctic diptera. (**4,** lix, p. 79-92, ill.) ***Curran, C. H.**—Four new species of Volucella. (Syrphidae.) (**19,** xxii, p. 84-88.) ***Curran, C. H.**—Synopsis of males of the genus Platycheirus, with descriptions of new Syrphidae. (**138,** No. 247, 13 pp.) ***Hearle, E.**—A new Canadian mosquito (Culicidae.) (**4,** lix, p. 101-103.) ***Johnson, C. W.**—New species of Scatophagidae. (**5,** xxxiv, p. 100-103.) ***Malloch, J. R.**—Descriptions of a new genus and three new species of diptera. (**10,** xxix, p. 90-93.) ***Walley, G. S.**—Two new species of Empididae from Ontario. (Empididae.) (**4,** lix, p. 96-98, ill.) **Walley, G. S.**—Review of the Canadian species of the dipterous family Blephariceridae. (**4,** lix, p. 112-116, ill.)

(S) ***Curran, C. H.**—New Neotropical and Oriental diptera in the Am. Mus. of Nat. Hist. (**138,** No. 245, 9 pp.) ***Curran, C. H.**—New West Indian Tachinidae. (**138,** No. 260, 15 pp.) ***Van Duzee, M. C.**—New Dolichopodidae from the West Indies. (**138,** No. 262, 10 pp.)

COLEOPTERA.—Banks, N.—The Bowditch collection of Chrysomelidae. (**5,** xxxiv, p. 134.) **Bodenheimer, F. S.**—Ueber die ökologischen grenzen der verbreitung von Calandra oryzae und Calandra granaria. (Curcul.) (**45,** xxii, p. 65-73, ill.) **Darlington, P. J.**—Aegialia arenaria in New England, with local records for other species. (**5,** xxxiv, p. 98-99.) **Doane, R. W.**—The genus Ips on the Stanford campus. (**12,** xx, p. 284-286.) **Dobrzanski, T.**—Les organes genitaux des Coccinellidae comme caractere taxonomique. [Russian]. (Bul. Acad. Sci., URSS, 1926, p. 1385-1394.) **Heikertinger, F.**—Ueber myrmekoidie als "anpassung" bei Histeriden. (Zool. Anz., lxxi, p. 23-43, ill., Cont.) **Hubenthal, W.**—Entomologische irrtümer. (**131,** xxiii, p. 40-42.) **Steele, B. F.**—Notes on the feeding habits of carrion beetles. (**6,** xxxv, p. 77-81, ill.) **Van Dyke, E. C.**—[Collecting in the wet belt of western Oregon.] (Proc. Pac. Coast Ent. Soc., ii, p. 70-72.) **Van Dyke, E. C.**—Secondary sexual characters of the coleoptera. (Proc. Pac.

Coast Ent. Soc., ii, p. 75-84.) **Viggiani, G.**—Alcune notizie sulla morfologia e sulla biologia della Tropinota hirta, con speciale riguardo ai danni da essa recati alle coltivazioni erbacee ed arboree. (Bol. Soc. Nat., Napoli, xxxvii, p. 28-53, ill.) **Watson, E. B.**—Notes on the hibernation of the spruce bark-beetle, Ips perturbatus in northern Ontario. (**4,** lix, p. 120-122.) **West, E.**—Records of fungous beetles in Florida. (**6,** xxxv, p. 63.) **Zimmermann, A.**—Aus der praxis des käfersammlers. Wo und wie sammelt man Dytisciden? (**79,** xiii, p. 81-86.)

(N) **Hatch, M. H.**—A revision of fossil Gyrinidae. (**19,** xxii, p. 89-96, ill.) **Obenberger, J.**—Buprestis splendens und ihre nord-amerikanischen verwandten. (**26,** vii, p. 99-100, cont.) **Strand, E.**—Animaux divers (à l'exclusion des Arachnides, Lepidopteres et Hymenopteres) nommés jusq'en 1926 dans les travaux. (**111,** 1926, A, hft. 8, p. 62-66.)

(S) ***Aurivillius, C.**—Cerambyciden gesammelt von A. Roman in Brasilien. (**137,** xviii, B, No. 14, 6 pp.) ***Borchmann, F.**—Wissenschaftliche ergebnisse der bearbeitung der coleopteren-sammlung von Franklin Müller. Meloidae und Lagriidae. (**49,** xvi, p. 124-128, ill.) ***Darlington, P. J.**—Four new Helmidae from Cuba, with notes on other West Indian species. (**5,** xxxiv, p. 91-97.) ***Fall, H. C.**—Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Chrysomelidae. (**61,** xvi, p. 381-393.) ***Pic, M.**—Melanges exotico-entomologiques, Fasc. 48, 32 pp. ***Uhmann, E.**—Hispinen des Deutsch. Ent. Institutes. Beitrag zur Kenntnis der Hispinen. (**49,** xvi, p. 134-137.) ***Weise, J.**—Uber bekannte und neue Chrysomeliden und Coccinelliden aus dem reichsmuseum zu Stockholm. (**137,** xviii, A, No. 34, 34 pp.)

HYMENOPTERA.—Bugnion, E.—Les pièces buccales, le sac infrabuccal et le pharynx des fourmis. (**81,** i, p. 27-42, ill.) **Fox, C. L.**—[Collecting hymenoptera in eastern Washington.] (Proc. Pacific Coast Ent. Soc., ii. p. 69-70.) **Grandi, G.**—Contributi alla conoscenza della biologia e della morfologia degli Imenotteri melliferi e predatori. (**23,** xix, p. 269-325, ill.) **Hicks, C. H.**—Pseudomasaris vespoides, a pollen provisioning wasp. (**4,** lix, p. 75-79.) **Plath, O. E.**—Notes on the nesting habits of some of the less common New England bumble-bees. (**5,** xxxiv. p. 122-128, ill.) **Verlaine, L.**—L'epeire diadème et les hyménopteres vulnérants. (**33,** lxiv, p. 61-69, ill.)

(N) ***Cushman, R. A.**—New sps. and new forms of Ichneumonidae parasitic upon the gypsy-moth parasit "Apan-

teles melanoscelus." (Jour. Agr. Res., xxxiv, p. 453-458.) ***Frison, T. H.**—A contribution to our knowledge of the relationships of the Bremidae of America north of Mexico. (**1,** liii, p. 51-78, ill.) ***Frison, T. H.**—Records and descriptions of western bumblebees. (Bremidae.) **61,** xvi, p. 365-380, ill.) ***Gahan, A. B.**—A new species of Syntomaspis. (**10,** xxix, p. 99-100.) ***Mitchell, T. B.**—New megachilid bees. (**5,** xxxiv, p. 104-121.) ***Schwarz, H. F.**—North American bees of the genus Anthidium. Additional N. A. bees of the genus Anthidium. (**138,** Nos. 252, 253, 22 and 17 pp.)

A Note on the New Species in Tillyard's "Insects of Australia and New Zealand."

In my recent review (Ent. News, 38: 92-93, 1927) of Tillyard's "Insects of Australia and New Zealand," I took occasion to criticize the use of the abbreviation "N.sp." found frequently throughout the text and since it may lead to confusion in the future, opportunity is here taken to record Dr. Tillyard's explanation of its use expressed in a letter to the writer. Since the majority of instances in which "n.sp." occurs are in error and in view of the fact that two new species are described in the text, Dr. Tillyard's statement seems worthy of note. The following is taken from his letter: "May I remark about your criticism *re* the use of 'n.sp.' in my book. I planned the book thirteen years ago (the Australian portion) and began to write it in 1923. In selecting types for illustration, I found there were none available in certain large groups, *e.g.*, in most families of Thysanura, so I took available undescribed species, and drew and described them in my Mss., calling them *n.sp. until published. All but two were published before 1926.* [Italics by Tillyard.] The publishers, during my absence, failed to remove the words 'n.sp.' and replace them by 'Till.', though they were duly notified. There is not a single 'n.sp.' in the book which has not been described; you will find, for instance, *Nesomachilis maoricus* Till. and other Thysanura described in Part I of my 'Primitive Wingless Insects' under the reference given at end of the chapter on Thysanura. I worked off all the 'n.spp.' before the book was published, with two exceptions only, viz. *Apachyus australis* (Dermaptera) and *Austromicron zygopterarum* (Hymenoptera): both of these are actually described in appendices in the book. Had I not been travelling in America and Europe last year, this little error about 'n.sp.' and other slips in publishing would not have been allowed to occur; it was my bad luck not to see the final proofs."—Wm. P. Hayes, University of Illinois.

Doings of Societies.

The American Entomological Society.

Meeting of February 24, 1927, in the hall of The Academy of Natural Sciences of Philadelphia, with Mr. R. C. Williams in the chair. Thirteen members and visitors were present.

The death of Dr. Mario Bezzi, a corresponding member of the Society, was announced. A motion that the Corresponding Secretary send a letter of condolence to Mrs. Bezzi was approved.

A letter from the Jubilee Committee for the celebration of 40 years of scientific work of Mr. Andreas Semenov Tian-Shansky of the Zoological Museum of the Academy of Sciences of the U. S. S. R., was read, inviting the Society to participate.

It was moved and seconded that the President appoint a committee of three to consider a program of collecting trips for the Spring and Summer of 1927.

Dr. Harry Allen was elected a resident member of the Society.

Mr. Coxey gave the communication of the evening, speaking on his recent trip to Ecuador. Many excellent lantern slides and photographs illustrated his talk.

ROBERT J. TITHERINGTON, *Recording Secretary.*

The Kansas Entomological Society.

The third annual meeting of the Kansas Entomological Society was held at Lawrence, Kansas, April 14, 1927. The session was called to order by President Roger C. Smith in Dyche Museum with twenty-two members present. After the introduction of the new members, interesting reports were given, together with exhibitions of material, on new and interesting records of Kansas insects. The report of the committee on a "State List of Kansas Insects" was then made and the meeting adjourned until 2:00 p. m.

In the afternoon an informal report was made by Professor J. W. McColloch on the 1927 outlook for insect injury in Kansas. Along with the discussion on the Hes-

sian fly and the chinch bug, Professor McColloch stated that termites are becoming increasingly numerous in the State. The Society went on record as in favor of a building code which would minimize injury from this pest.

Mr. Schenk gave a very interesting report on calcium cyanide dust fumigation of stored grain. It was his opinion there is a great future for this type of fumigation.

Perhaps the most interesting report of the entire meeting was that made by Mr. Warwick Benedict on the collecting in California and the rearing, both in California and in Kansas, of *Dinapate wrighti*. Mr. Benedict showed adults, pupae, mandibles of larvae, and a section of a palm log fourteen inches in diameter, which the beetles had tunneled from end to end. The log was collected in 1924 and beetles emerged that year and each year since.

A six o'clock dinner was given for the society by the local members at the University Club. The following attended the meetings: Professor Geo. A. Dean, Dr. Roger C. Smith, Professor J. W. McColloch, Dr. R. L. Parker, Professor Harry R. Bryson and Dr. Reginald H. Painter, of Manhattan; Dr. Hazel E. Branch and Mr. J. R. Norton, of Wichita; Mr. Lyle A. Stephenson and Mr. and Mrs. J. W. Blachly, Kansas City, Mo.; Mr. W. Knaus, McPherson; Mr. Warwick Benedict, Miss Kathleen Doering, Dr. H. B. Hungerford, Dr. Paul B. Lawson, Professor R. H. Beamer, Dr. P. A. Readio, Mr. Howard Deay, Mr. Chas. H. Martin and Mr. E. P. Breakey, of Lawrence; Mr. Schenk, American Cyanamid Sales Co., New York.

The meeting of the Society next year will be held in Wichita, Kansas, at about the time of the meeting of the Kansas Academy of Science.

Officers elected for the ensuing year are Mr. Warren Knaus, McPherson, Kansas, President, and Dr. R. L. Parker, Kansas State Agricultural College, Manhattan, Kansas, Secretary.

H. B. HUNGERFORD and R. L. PARKER, *Secretary*.

EXCHANGES

This column is intended only for wants and exchanges, not for advertisements of goods for sale. Notices not exceeding three lines free to subscribers.

These notices are continued as long as our limited space will allow; the new ones are added at the end of the column, and only when necessary those at the top (being longest in) are discontinued.

Buprestidae—I am making a revisional study of the North American Agrilus, and will be glad to examine any material in this genus collected north of Mexico. W. S. Fisher, U. S. National Museum, Washington, D. C.

Chrysomelidae—Desire to exchange coleoptera, especially in family Chrysomelidae. Send me your offerta in this family and your desiderata in coleoptera. Paul N. Musgrave, 601 Walnut Ave., Fairmont, W. Va.

Wanted—Cicindelidae & Cerambycidae in exchange for local coleoptera. Address Ernest Baylis, 5011 Saul Street, Philadelphia, Pa.

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